

DP-300744

IN THE SPECIFICATION:

Please substitute the following paragraph for the "Abstract of the Disclosure."

An exhaust gas catalyst system, comprising: a substrate; and a nitrogen oxide adsorber disposed on the substrate, the nitrogen oxides adsorber comprising: a porous support; and a material loaded on the porous support comprising: a NO_x oxidation catalyst; and an alkali material; and an alkali metal barrier disposed between the substrate and the nitrogen oxide adsorber.

Please substitute the following paragraph for the paragraph on page 7 beginning at line 22 and ending at line 25.

These reactions support the fact that once alkali materials are mobile, migration of alkali materials, specifically sodium and potassium, into the silica component a-of a ceramic substrate is driven even at operating temperatures expected for NO_x adsorber applications.

Please substitute the following paragraph for the paragraph on page 9 beginning at line 3 and ending at line 12.

Alternatively, if the alkali metal barrier is employed as a layer between the washcoat and supporting substrate, the alkali metal barrier could comprise a film thickness ranging from an atomic film (i.e., a film whose thickness is in the order of a few atoms thick) sufficiently thick to substantially seal the surface of the supporting substrate up to several microns (μ) thick (e.g., up to or exceeding about 100 μ). The lower limit would be a function of an ability to apply film and the film's ability to block alkali material migration, while the upper limit would relate to the barrier film's effects on the catalyst loading. It should be noted that a combination of an alkali metal barrier layer and alkali metal barrier in the washcoat can be employed.